

**REMARKS**

Claims 1-9 are pending in the application. Claims 1-3 are withdrawn from consideration and claims 4 and 5 are under rejection. Claims 4 and 5 are amended herein and claims 6-9 are newly added.

No new matter has been added by way of the present submission. For instance, claims 4 and 5 have been amended to require that "a Gurley permeability of the porous film is from 0.2 to 29 seconds per 100 cc" as supported by the present specification at page 12, lines 15-19. New claims 6-9 also find support at page 12, lines 15-19. Therefore, no new matter has been added.

In view of the following remarks, the Examiner is respectfully requested to withdraw all rejections and allow the currently pending claims.

**Issue under 35 U.S.C. §§ 102(b)/103(a)**

The Examiner has rejected claims 4 and 5 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over Shigeru et al., JP2002-086476, English translation provided (hereinafter referred to as the English translation of Shigeru '476). Applicants respectfully traverse this rejection.

As discussed above, claims 4 and 5 have been amended to require that the Gurley permeability of the present porous film is from 0.2 to 29 seconds per 100 cc. In contrast, in the English translation of Shigeru '476, the Gurley permeability of the porous film is from 135 to 170 seconds per cc (see Table 1 of the English translation of Shigeru '476). Accordingly, there exists no anticipation. Moreover, with no suggestions of such subject matter, there also exists no obviousness. This will be further explained below.

A main feature of the present invention relates to the production of a porous film by using a polymer and a substrate. The polymer constituting the porous film has a surface tension  $S_a$  [mN/m (=dyn/cm)], the substrate has a surface tension  $S_b$  [mN/m (=dyn/cm)], and  $S_a$  and  $S_b$  satisfy the following condition:  $S_a - S_b \geq -10$  (see page 6, lines 14-19 of the present specification).

In Comparative Example 2 of the present application, a film was prepared by the procedure of Example 1, except for using *an aluminum substrate having a surface tension of 914 mN/m (=dyn/cm)* as a substrate for casting instead of the Teflon<sup>TM</sup> substrate. The structure of the resulting film was then observed and it was found that the substrate-side surface of the film contained pores having too irregular shapes to determine the average pore size  $A^1$ . The average rate of hole area (porosity)  $C^1$  was estimated as 10% or less. The air-side surface of the film contained pores having an average pore size  $A^2$  of about 1.3  $\mu\text{m}$ , a maximum pore size of 2.7  $\mu\text{m}$  and an average rate of hole area (porosity)  $C^2$  of about 70%. The inside of the film was substantially homogenous and entirely contained continuous micropores having an average pore size  $B$  of about 1.2  $\mu\text{m}$  and a maximum pore size of about 2.2  $\mu\text{m}$  with an average rate of inner hole area (porosity)  $D$  of about 70%. These results show that the substrate-side surface of the film has a low rate of hole area (porosity) and has peculiar dimensions as compared with the air-side surface and the inside of the film, and that the film as a whole lacks uniformity.

On the other hand, in Shigeru, *a stainless steel belt* is used as the substrate (see [0009] of the English translation of Shigeru '476). The film of Shigeru '476 is thus estimated to have a value of  $S_a - S_b$  of less than -10, similar to the Comparative Example 2 of the present application. If the value of  $S_a - S_b$  is less than -10, the polymer coagulates at the interface between the polymer and the substrate to thereby form a compact phase, and the substrate-side surface of the

film has a low rate of hole area (porosity) of 40% or less (see Table 1 of the present invention). Therefore, in Shigeru '476, the Gurley permeability of the porous film is as large as 135 to 170 seconds per 100 cc.

It is therefore apparent that the present porous film completely differs from the film of Shigeru. In view of the above, Applicants respectfully submit that there exists no anticipation or obviousness of the present claims based upon the disclosure of the English translation of Shigeru '476. The Examiner is thus requested to withdraw this rejection and allow the currently pending claims.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Craig A. McRobbie, Reg. No. 42,874 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§ 1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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